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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/002,577

10/26/2001

Robert M. Janney

SP-1439.1

4281

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7590

06/03/2004

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EXAMINER

BELL, BRUCE F

ART UNIT

PAPER NUMBER

1746

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/002,577

Applicant(s)

JANMEY, ROBERT M.

Examiner

Bruce F. Bell

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-46 is/are allowed.
- 6) ☒ Claim(s) 1-8, 12, 13, 17 and 25 is/are rejected.
- 7) ☒ Claim(s) 9-11, 14-16 and 18-24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/26/01
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. Figure s 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 6, 12, 13, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by JP Patent Application 7-134977 to Yoko et al.

Yoko et al disclose a cylindrical alkaline battery cell having a separator that is improved by coating a sealing agent with adhesive properties on the contact part of the separator opening end face. See page 2, lines 26 and 27 and page 3, line 1. The sealing agent used on the separator is a polyolefin or polyamide. See page 4, claim 3 and paragraph [0009]. The battery cell is shown to have a negative gelled zinc electrode with a negative active material and a positive electrode composite material which are in contact with each other via a separator having an open end. See paragraph [0004]. The particular polyolefin sealant

used is disclosed to be a polypropylene which is coated on the contact part (9) of the separator (3). See paragraph [0012]. The figures show that the separator has a first region located beyond the interface of the electrodes and below the closure assembly and a second region located between the electrodes, with the first region having the sealant (reinforcing) material and the second region not having the sealant material. The figures also show the sealant (reinforcing) material being substantially parallel to the containers sidewalls. The figure 1 shows that the separator is a tube having an open end and a closed end. Yoko et al also disclose that the sealant agent is applied to the contact part of the separator on the opening end face which since the separator is tube shaped means that the entire circular surface is covered making it a continuous coating. The prior art of Yoko et al anticipates the applicants' instant invention as shown by the teachings above. Yoko et al discloses a sealant agent to be coated on the separator but does not disclose that it is a reinforcement material. However, since the prior art sealant and applicants' instant reinforcement materials are the same materials, the sealant inherently will act as a reinforcement since it is sealing the electrolyte from getting into the separator and out of the battery, which is what the sealant is being used for in the prior art device. Therefore, the prior art of Yoko et al anticipates the applicants' instant invention as set forth.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, 7, 8, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoko et al (JP Patent Application 7-134977) in combination with Tucholski et al (US 6670073).

Yoko et al is as taught above in the 35 USC 102 rejection above.

Yoko et al does not disclose that the separator is made of non-woven fibers, or that the electrolyte is a gel electrolyte of KOH or that the reinforcing agent coats the fibers of the non-woven separator.

Tucholski et al disclose that the second electrode (20) comprises KOH electrolyte, zinc and a gelling agent and that the separator is a non-woven fiber separator and that the first electrode is manganese oxide. Tucholski et al shows that the conventional alkaline cell has the above characteristics. See col. 1, lines 19-48.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the instant invention was made because even though the Yoko et al reference does not teach the use of a non-woven fiber separator, and the use of gelled KOH electrolyte in the second electrode or that the fibers are coated by a reinforcing material in the area of the electrode that extends beyond that of the first electrode, the prior art of Tucholski et al discloses that the conventional alkaline cell has the non-woven fiber separator and the gelled KOH electrolyte mixed with the zinc in the second electrode. Therefore, the person

having ordinary skill in the art would recognize that if Yoko et al did not have those features, that it would be within the ability of the person having ordinary skill in the art to use the conventional separator and electrolyte and coat the separator fibers to seal or reinforce the separator to keep the electrolyte from entering the separator in that portion extending past that of the first electrode. Therefore, prior art of Yoko et al in combination with Tucholski et al renders the applicants' instant invention obvious.

***Allowable Subject Matter***

6. Claims 9-11, 14-16, 18-24, 26-46 are allowable over the prior art of record.
7. Claims 9-11, 14-16, 18-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach and/or suggest a reinforcing material that permeates through the pores of the separator or that only one surface of the separator is partially coated with the reinforcement material nor does the prior art disclose how far into the interfacial surface area between the first and second electrode that the reinforcement material goes. Further, the use of the reinforcement material on both edges of the separator is not taught or suggested, nor is the method of making an electrochemical cell as set forth in the instant claims as set forth.

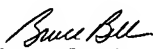
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 571-272-1296. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BFB  
June 1, 2004

  
Bruce F. Bell  
Primary Examiner  
Art Unit 1746